Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN EDWARD COOK and PAUL DOUGLAS PERRY



Appeal No. 2003-1391
Application No. 09/165,772

ON BRIEF

Before PAK, WALTZ, and POTEATE, Administrative Patent Judges.
WALTZ, Administrative Patent Judge.

**DECISION ON APPEAL**

This is a decision on appeal from the primary examiner's final rejection of claims 1 through 3 and 17, which are the only claims pending in this application.[1] We have jurisdiction pursuant to 35 U.S.C. § 134.

According to appellants, the invention is directed to automotive fuel leak detection methods and systems (Brief, page 2).

[1]Non-elected claims 4 through 16 were cancelled by an amendment subsequent to the final rejection (see the amendment dated May 10, 2002, Paper No. 21, entered as noted in PTO-90 dated April 3, 2003, Paper No. 23).

A further understanding of appellants' invention may be gleaned from representative independent claim 1 which is reproduced below:

1. A method for automotive evaporative leak detection for use with a system including a tank having vapor at a known pressure at a first point in time, the method comprising:

measuring and recording a first temperature of the vapor at substantially the first point in time;

measuring and recording a second temperature and a measured pressure of the vapor at a second point in time;

computing a temperature-compensated pressure based on previously measured values; and

comparing the temperature-compensated pressure with the pressure measured at a second point in time to detect a leak.

Appellants state that claims 1-3 and 17 stand or fall together (Brief, page 4). Accordingly, we select representative independent claim 1 from this grouping and decide the ground of rejection in this appeal on the basis of this claim alone. See 37 CFR § 1.192(c)(7)(2000).

The examiner relies upon Basile et al. (Basile), U.S. Patent No. 3,413,840, issued Dec. 3, 1968, as evidence of obviousness. Accordingly, the claims on appeal stand rejected under 35 U.S.C. § 103(a) as unpatentable over Basile (Answer, page 3, with reference to the prior Office action, Paper No. 15).[2] We *affirm*

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[2]The final rejection of claims 1-3 under the second (continued...)

the rejection on appeal essentially for the reasons stated in the Answer and those reasons set forth below.

**OPINION**

The examiner finds that Basile discloses the continual measurement of pressure and temperature in the detection of storage tank leaks, with the calculation of pressure via the ideal gas law at other known temperatures, for the purpose of comparing the calculated pressure with the actual pressure to determine if a leak has occurred (final Office action dated Mar. 15, 2001, Paper No. 15, pages 3-4; see also the Answer, page 4). The examiner recognizes that Basile fails to test automotive tanks (Paper No. 15 at page 3). However, the examiner concludes that it would have been obvious to one of ordinary skill in the art to apply the method of Basile to automotive tanks (*id.*), especially since Basile teaches the general applicability of this method to other tank-like structures (Answer, page 5). We agree.

Appellants argue that Basile fails to teach or suggest the claimed invention for four reasons (Brief, page 6). First, appellants argue that Basile is not directed to a leak detection

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[2](...continued)
paragraph of 35 U.S.C. § 112 has been withdrawn by the examiner (Answer, page 3).

system for an automotive fuel system but is directed to a leak detection system for double walled tanks of sea-going vessels with cargoes of liquefied gases (*id.*). This argument is not persuasive since, as noted above by the examiner, Basile teaches that their method is applicable as a leak detection system for "indicating leaks within the walls of an enclosed constant volume tank." Basile, col. 1, ll. 23-26. Accordingly, we concur with the examiner that Basile would have suggested to one of ordinary skill in the leak detection system art the applicability of their method to other types of constant volume storage tanks.[3]

Additionally, we note that claim 1 under consideration does not require that the method be performed in an automotive vehicle fuel system. The phrase "for automotive evaporative leak detection" as recited in claim 1 on appeal is merely a preamble of intended purpose, and this phrase is not language that is essential to particularly point out the invention defined by the claims. *See Bell Communications Research inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620, 34 USPQ2d 1816, 1819-20 (Fed. Cir. 1995). When a

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[3]Appellants do not specifically argue that Basile is non-analogous art (see the Brief in its entirety). Therefore we do not consider the argument *supra* as an argument that Basile is non-analogous art, in contrast to the examiner (Answer, pages 4-5).

preamble simply states the intended use or purpose of the invention, it does not limit the scope of the claim where, as here, the preamble does not provide antecedents for ensuing claim terms and does not limit the claim accordingly. *See CR Bard Inc. v. M3 Systems Inc.*, 157 F.3d 1340, 1350, 48 USPQ2d 1225, 1231 (Fed. Cir. 1998).

Second, appellants argue that Basile shows a leak detection system based on sensing an appreciable transfer of mass in contrast to appellants' invention in which changes in fuel vapor mass are assumed negligible (Brief, page 6). This argument is not persuasive for reasons adequately stated by the examiner (Answer, paragraph bridging pages 5-6), namely that contrary to appellants' argument Basile does not disclose or suggest a large magnitude of mass transfer. Furthermore, we note that mass transfer is not recited in claim 1 on appeal.

Third, appellants argue that Basile is not directed to a leak detection system that includes the computation of compensation (Brief, pages 6-7). This argument is not persuasive since Basile discloses a leak detection system that includes the computation of a calculated pressure, which is then compared to the sensed pressure at an earlier time and temperature (Answer, pages 5-6;

Basile, col. 2, ll. 9-25; col. 2, ll. 48-52; and col. 3, ll. 25-39).

Fourth, appellants argue that Basile is not directed to a system that depends on temperature changes (Brief, pages 6-7). Appellants further argue that Basile compares calculated and measured pressure values at a common point in time to detect leakage, in contrast to appellants' invention which compares a temperature-compensated vapor pressure to a vapor pressure measured at a different point in time (Brief, page 7). This argument is not well taken for the reasons stated on page 5 of the Answer, namely that Basile recognizes that the temperature varies and measures vapor pressure at different points in time. See col. 1, l. 65-col. 2, l. 9, where Basile teaches that one must be able to determine whether a rise in pressure occurs because of a rise in temperature or due to a leak. Basile plots the computed pressures "on a *time* scale" to act as a standard against the plotted actual sensed pressure, thus determining by comparison whether a leak has occurred (col. 3, ll. 25-28, italics added). Basile recognizes that the temperature varies but it is a parameter common to the calculated standard and the actual pressure (col. 3, ll. 29-39). Accordingly, Basile measures pressures at different points in time at varying temperatures, to compare the actual sensed pressure

against the calculated ideal gas law pressure to determine if a leak has occurred (col. 3, ll. 66-70).

For the foregoing reasons and those stated in the Answer, we determine that the examiner has established a *prima facie* case of obviousness in view of the reference evidence. Based on the totality of the record, including due consideration of appellants' arguments, we determine that the preponderance of evidence weighs most heavily in favor of obviousness within the meaning of section 103(a). Accordingly, the rejection of claim 1 on appeal, and claims 2, 3 and 17 which stand or fall with claim 1, under 35 U.S.C. § 103(a) over Basile is affirmed.

**OTHER ISSUE**

In the event of further or continuing prosecution before the examiner, the examiner and appellants should consider the patentability of the claimed subject matter with respect to the issue of the judicially created doctrine of obviousness-type double patenting in view of the commonly-assigned, same inventorship U.S. Patent No. 6,089,081.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

**AFFIRMED**

CHUNG K. PAK )
Administrative Patent Judge )
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THOMAS A. WALTZ ) BOARD OF PATENT
Administrative Patent Judge ) , APPEALS
) AND
) INTERFERENCES
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LINDA R. POTEATE )
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